

Express Mail No.: EV530944546US  
International Application No.: PCT/EP2003/006814  
International Filing Date: June 27, 2003  
Preliminary Amendment Accompanying  
Substitute Specification

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) ~~A heating device (2) for a fluid line (5, 50), in particular for a crankcase venting system of an internal combustion engine, with comprising:~~

~~a heating element (3, 7) and with;~~

~~a holding device (4), through which adapted to couple the heating element can be fitted to the fluid line, characterised in that the heating device (2) exhibits; and~~

~~a projection (9), in which adapted to receive the heating element (3, 7) can be held and which is adapted to be inserted in a well in the fluid line, wherein (20) with a well wall (14, 20', 30') of the fluid line (5, 50) adjacent is contiguous to the an inner space (15) of the fluid line (5, 50).~~

2. (Currently Amended) ~~The heating device (2) according to Claim claim 1, characterised in that wherein the holding device is provided withcomprises an elastic clamping section (10), which is arranged at least partially to abut againstcontiguous to the an outer wall (14) of the fluid line.~~

3. (Currently Amended) ~~The heating device (2) according to Claim claim 2, characterised by further comprising a recess (11) formed between the projection (9) and the clamping section (10) and in which, wherein the recess at least partially, receives the outer wall (14) of the fluid line (5) can be accommodated.~~

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4. (Currently Amended) Heating The heating device according to one of the above mentioned claimsclaim 1, characterised in that wherein the heating device (2) is formed as a module unit, in which the heating element (3) is preassembled in the holding device (4).

5. (Currently Amended) Heating The heating device (2) according to one of the above mentioned claimsclaim 1, characterised in that wherein the heating element (3) is formed in the shape of a plate.

6. (Currently Amended) Heating The heating device (2) according to one of the above mentioned claimsclaim 1, characterised in that wherein:  
the projection (9) exhibits comprises a polygonal cross-section substantially transverse to the mounting direction; and  
whereby a flat side of the polygon faces an the inner space of the fluid line(15).

7. (Currently Amended) Heating The heating device (2) according to one of the above mentioned claimsclaim 1, characterised in that further comprising the heating element (3) comprises a PTC heating element (7).

8. (Currently Amended) Heating The heating device (2) according to Claim claim 7, characterised in that further comprising:  
the PTC heating element (7) is arranged between at least two electrically conducting contact plates wherein the PTC heating element is at least partially positioned between the conducting contact plates(6a, 6b), which continue in:  
a plug connector; and

at least two connector contact lugs (8a, 8b) coupling the conducting contact plates to a the plug connector.

9. (Currently Amended) Heating The heating device (2) according to one of the above mentioned claimsclaim 8, characterised in that wherein the projection (9) is formed by at least one electrically conducting contact plate (6a, 6b).

10. (Currently Amended) Heating The heating device (2) according to one of the above mentioned claimsclaim 8, characterised in that wherein at least one side of the projection (9) is formed by a contact plate, (6a, 6b), which is designed so that it can be brought directly into contactconfigured to be contiguous with a well wall of the fluid line.

11. (Currently Amended) Heating The heating device (2) according to one of the above mentioned claimsclaim 8, characterised in that wherein at least one contact plate (6a, 6b) formscomprises a spring section (46), which, with the projection (9) inserted into the well, is designedconfigured to elastically press against the heating element elastically deformably through theand a well wall of the fluid line.

12. (Currently Amended) Heating The heating device (2) according to one of the above mentioned claimsclaim 1, characterised in that further comprising the holding device (4) is provided with at least one guiding element (12), which is designedconfigured to guide the holding device (4) in an insertion direction (M) whenwhen coupling the holding device is pushed intoto the fluid line (5).

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13. (Currently Amended) ~~The heating~~ heating device (2) according to ~~one of the above mentioned claims~~ claim 1, characterised in that ~~wherein~~ the holding device (4) is ~~produced~~ fabricated from an electrically insulating material.

14. (Currently Amended) ~~Kit~~ A kit for a heating module (1) for fluid lines, ~~in particular for crankcase venting systems of an internal combustion engine, with~~ comprising:

a tubular fluid line (5, 50) and with; and

~~a heating device (2) mounted on the fluid line, characterised in that the heating device (2) is arranged according to one of the above mentioned claims, wherein the heating device comprises:~~

a heating element;

a holding device, adapted to couple the heating element to the fluid line; and

a projection, adapted to receive the heating element and be inserted in a well in the fluid line, wherein a well wall of the fluid line is contiguous to an inner space of the fluid line.

15. (Currently Amended) ~~Kit~~ The kit according to ~~Claim~~ claim 14, characterised in that further comprising also a thermally conducting element (51) is included, ~~which is arranged for accommodation in~~ adapted to couple to the fluid line (5, 50).

16. (Currently Amended) ~~Kit~~ The kit according to ~~Claim~~ claim 15, characterised in that wherein the thermally conducting element (51) at least partially surrounds an inner space (15) of the fluid line (5, 50), at least partially.

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17. (Currently Amended) ~~Fluid~~ A fluid line, (5, 50), in particular for a  
~~car~~ ~~ease~~ ~~venting~~ ~~system~~ of an internal combustion engine, with comprising:

~~a tubular line section, which is surrounded by;~~  
an inner space; and

~~an outer wall (14), having characterised by a well (20), and at least one~~  
~~well wall (14, 20', 30') of which is adjacent to contiguous to the inner space (15, 31, 32)~~  
~~of the fluid line (5) and which is designed for accommodating through insertion a heating~~  
~~element and configured to receive a holding device by which the coupled to a heating~~  
~~element can be mounted on the fluid line.~~

18. (Currently Amended) ~~Fluid~~ The fluid line (5, 50) according to  
Claim claim 17, characterised in that ~~wherein~~ the well is formed between ~~comprises~~ an  
inner surface facing the inner space (15) of the fluid line (5, 50) and an outer surface of  
the outer wall (14) facing outwards.

19. (Currently Amended) ~~Fluid~~ The fluid line (5, 50) according to  
Claim claim 17 or 18, characterised in that ~~wherein~~ a portion of the outer wall  
contiguous to the well (20) is arranged in a region in which the wall thickness of the outer  
wall (14) is increased thicker with respect to the surrounding regions.

20. (Currently Amended) ~~Fluid~~ The fluid line (5, 50) according to ~~one~~  
~~of the Claims~~ claim 17 to 19, characterised in that ~~wherein the a~~ well (20) opens  
opening in ~~is substantially a~~ radially parallel direction to the tubular line section.

21. (Currently Amended) ~~Fluid~~ The fluid line (5, 50) according to ~~one~~  
~~of the Claims~~ claim 17 to 20 characterised in that ~~wherein the a~~ well (20) opens opening

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is substantially in the longitudinal direction of the fluid line longitudinally parallel to the tubular line section (5, 50).

22. (Currently Amended) Fluid The fluid line (5, 50) according to one of the Claims claim 17 to 24, characterised in that operable to allow fluid flow contiguous to the well wall, wherein the well walls extend wall extends into the interior (15) an interior of the fluid line (5, 50) and in operation have fluid flowing around them.

23. (Currently Amended) Fluid The fluid line (5, 50) according to Claim claim 17, characterised in that the well walls form wall comprises a projection protruding into the inner space interior (15).

24. (Currently Amended) Fluid The fluid line (5, 50) according to Claim claim 17, characterised in that wherein the well walls form wall comprises a partition (32), which subdivides dividing the interior inner space (15) of the fluid line piece in flow regions separated from one another.

25. (Currently Amended) Fluid The fluid line (5, 50) according to one of the Claims claim 17 to 24, characterised in that further comprising the well (20) exhibits a quadrangular section on the well in the a direction substantially transverse to the mounting direction, whereby wherein at least one flat side of the quadrangle faces the inner space (15).

26. (Currently Amended) Fluid The fluid line (5, 50) according to one of the Claims claim 17 to 25, characterised in that wherein the inner surface of the outer wall (14) facing the inner space of the fluid line exhibits has at least one a flat section (18).

27. (Currently Amended) ~~Fluid~~ The fluid line (5, 50) according to one of the ~~Claims~~claim 17 to 26, ~~characterised in that~~ wherein the outer wall (14) exhibits has at least one guide element (21) by which the heating device can be guided in an insertion direction (M) when coupling to the fluid line.

28. (Currently Amended) ~~Fluid~~ The fluid line (5, 50) according to ~~Claim~~claim 27, ~~characterised in that~~ wherein the guide device element (21) comprises at least one groove.

29. (Currently Amended) ~~Fluid~~ The fluid line (5, 50) according to one of the ~~Claims~~claim 17 to 28, ~~characterised in that~~ further comprising the outer wall (14) exhibits at least one weakened region, wherein (21) by which a local limited deformation of the well (20) can be realisedrealized by the action ofapplication of a force (F).

30. (Currently Amended) ~~Fluid~~ The fluid line (5, 50) according to ~~Claim~~claim 29, ~~characterised in that~~ wherein the weakened region (21) is formed groove shaped.

31. (Currently Amended) ~~Fluid~~ The fluid line (5, 50) according to ~~Claim~~claim 29 or 30, ~~characterised in that~~ wherein the weakened region (21) is formed in the outer surface (19) of the outer wall (14).

32. (Currently Amended) ~~Fluid~~ The fluid line (5, 50) according to one of the ~~Claims~~claim 29 to 31, ~~characterised in that~~ wherein the weakened region (21) overlaps the well (20) in thea substantially radial direction.

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33. (Currently Amended) ~~Fluid~~ The fluid line (5, 50) according to one of the ~~Claims~~claim 17 ~~to~~ 32, ~~characterised in that~~ wherein the fluid line (5, 50) is ~~produced~~ fabricated from a thermally conducting metallic material.

34. (Currently Amended) ~~Fluid~~ The fluid line (5, 50) according to one of the ~~Claims~~claim 17 ~~to~~ 33, ~~characterised in that~~ wherein the well (20) is separated from the inner space of the fluid line by the ~~external~~ outer wall (14) from the inner space (15) of the fluid line.

35. (Currently Amended) ~~Fluid~~ The fluid line (5, 50) according to one of the ~~Claims~~claim 17 ~~to~~ 34, ~~characterised in that~~ wherein the fluid line (5, 50) is formed as an angled element in which the fluid flow direction in operation can be deviated by a certain angle.

36. (Currently Amended) ~~Fluid~~ The fluid line (5, 50) according to ~~Claim~~ claim 35, ~~characterised in that~~ wherein the well (20) is arranged in a front surface of the fluid line (5, 50).

37. (Currently Amended) ~~Fluid~~ The fluid line (5, 50) according to one of the ~~Claims~~claim 17 ~~to~~ 36, ~~characterised in that~~ wherein the fluid line (5, 50) is formed as a tubular element (5).

38. (Currently Amended) ~~Fluid~~ The fluid line (5, 50) according to one of the ~~Claims~~claim 17 ~~to~~ 36, ~~characterised in that~~ wherein the fluid line (5, 50) is formed as a valve (50).

39. (Currently Amended) Kit A kit for a heating module for fluid lines, (5, 50), in particular for crankease venting systems of an internal combustion engine, with a tubular fluid line and with a heating device which can be mounted on the fluid line, characterised in that wherein the fluid line (5, 50) is formed according to one of the Claims 17 to 38comprises a tubular line section, an inner space, and an outer wall having a well and at least one well wall contiguous to the inner space and configured to receive a holding device coupled to a heating element.

40. (Currently Amended) Heating A heating module with a fluid line (5, 50) forming having an outer wall (14) and an inner space, in particular for the crankease venting of an internal combustion engine, and with a heating device (2) mounted on the fluid line (5, 50), the said heating device comprising a heating element (3) acting on the outer wall, a projection, (14) and a holding device (4) holding the heating element (3) on the fluid line (5, 50), characterised in that, wherein, in the fluid line (5, 50), has a well (20) is formed, in which that receives a the projection (9) of the heating device (2) holding the heating element (3) is accommodated and of which at least one well wall (14, 20', 30) borders is contiguous to the inner space (15, 31, 32) of the fluid line (5, 50).

41. (Currently Amended) Heating The heating module (1) according to Claim claim 40, characterised in that wherein the holding device (4) is held by repeated positive locking on the fluid line (5, 50).

42. (Currently Amended) Heating The heating module (1) according to Claim claim 40 or 41, characterised in that wherein the a clamping section is latched into the well on the fluid line in the insertion direction of the projection.

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43. (Currently Amended) ~~Heating~~ The heating module (1) according to ~~one of the Claims~~claim 40 to 42, ~~characterised in that~~ wherein the outer wall (14) is plastically deformed at least in the region of the well (20).

44. (Currently Amended) ~~Method~~ A method for the manufacture of a heating module for a fluid line, having an inner space and an outer wall, ~~in particular for~~ ~~earns~~ ~~venting in an internal combustion engine~~, comprising ~~the following method~~ step:

— ~~Insertion~~ inserting of a heating element (3, 7) arranged on a projection (9) of a heating device (2) in a well (20) adjacent contiguous to ~~an~~ the inner space of the fluid line (15, 50) ~~in the~~ and outer wall of the fluid line.

45. (Currently Amended) ~~Method~~ The method according to ~~Claim~~ claim 44, further comprising ~~the following method~~ step:

— ~~Clamping~~ clamping a holding device firmly to the outer wall.

46. (Currently Amended) ~~Method~~ The method according to ~~Claim~~ claim 44 or 45, further comprising ~~the following method~~ steps:

— ~~Preassembly~~ of preassembling the heating element and holding device to form a module unit; and

— ~~Mounting~~ of mounting the module unit on the fluid line.

47. (Currently Amended) ~~Method~~ The method according to ~~one of the Claims~~claim 44 to 46, further comprising ~~the following method~~ step:

— ~~Deformation~~ of deforming the fluid line with the inserted heating element and simultaneous simultaneously pressing of the heating element in the well.

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48. (New) The heating device according to claim 1 wherein the fluid line is for a crankcase venting system of an internal combustion engine.